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# **Report Summary:**

<u>ghlights</u>	<u>January 1, 2012</u>	<u>January 1, 2014</u>
Contributions		
Funding Schedule FY 2015	\$14,753,156	\$14,753,156
Funding Schedule FY 2016	15,213,845	14,943,906
Funded Ratios		
GAS No. 25	61.9%	65.6%
<u>Participants</u>		
Actives	1,098	1,069
Retirees and Beneficiaries	644	714
Inactives	267	209
Disabled	<u>98</u>	<u>92</u>
Total	2,107	2,084
<u>Payroll</u>		
Payroll of Active Members	\$55,614,435	\$55,498,644
Average Payroll	50,651	51,916
Normal Cost		
Employer	2,818,191	2,885,544
Employee	4,773,276	4,815,844
Administrative Expenses	410,000	435,000
Total	8,001,467	8,136,388
Actuarial Accrued Liabilities		
Actives	163,952,153	168,615,536
Retirees, Beneficiaries, Disabilities and Inactives	175,054,711	196,311,301
Total	339,006,864	364,926,837
Actuarial Value of Assets	209,808,060	239,531,317
Unfunded Actuarial Accrued Liabilities	\$129,198,804	\$125,395,520

## **Introduction**

This report presents the findings of an actuarial valuation as of January 1, 2014, of Taunton Contributory Retirement System.

The actuarial valuation is based on:

- Provisions Chapter 32 of the Massachusetts General Laws, "M.G.L", as of January 1, 2014.
- Employee data provided by the Retirement Board
- Asset information reported to the Public Employee Retirement Administration Commission by the City of Taunton Contributory Retirement System
- Actuarial assumptions approved by the Retirement Board

The valuation and appropriation forecast are prepared in accordance with Chapter 32 of the M.G.L. as of January 1, 2014.

The valuation and forecast do not account for:

- Any subsequent changes in the law
- Chapter 32 of the M.G.L., Section 3(8)(c) transfers between systems
- State-mandated benefits
- Cost-of-living increases granted to retired members between 1982 and 1997. The
  cost of these benefits has been assumed by the State under Proposition Two and
  One-Half.

## **Actuarial Experience**

In performing the actuarial valuation, various assumptions are made regarding such factors as mortality, retirement, disability, and withdrawal rates as well as both payroll, salary increases, and investment returns. A comparison of the current valuation and the prior valuation is made to determine how closely actual experience corresponded to anticipated occurrences. This analysis of the system provides insight into the overall quality of the actuarial assumptions and helps explain any change in the annual appropriation.

During the last year, the total unfunded actuarial accrued liability decreased by 1.5% to \$125,395,520. The decrease is the result of net favorable actuarial experience during the preceding years and a change in actuarial assumptions. The assumed mortality and salary scale were modified from the 2012 actuarial valuation. The sources of actuarial (gains) and losses are as follows:

Assets Liabilities	2,752,809 (5,324,690)
Total (Gain) / Loss	(2,571,881)
Effect of Change in Assumptions	(935,927)

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## **Actuarial Costs and Liabilities:**

## **Normal Costs**

The normal cost is the sum of the individual normal costs determined for each member as if the assumptions underlying the cost determinations had been exactly realized. An individual normal cost represents that part of the cost of a member's future benefits which are assigned to the current year as if the costs are to remain level as a percentage of the member's pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation. Anticipated employee contributions to be made during the year are subtracted from the total normal cost to determine employer normal cost. The total normal cost is divided by total payroll to determine the normal cost as a percent of pay. The normal cost is shown in Table I.

Table 1	I	
	<u>January 1, 2012</u>	January 1, 2014
Superannuation	\$5,259,239	\$5,288,855
Termination	468,962	449,538
Death	293,061	338,477
Disability	1,570,205	1,624,518
Administrative Expenses	410,000	435,000
Total Normal Cost	8,001,467	8,136,388
% of Pay	14.4%	14.7%
Employee Contributions	4,773,276	4,815,844
% of Pay	8.6%	8.7%
Employer Normal Cost	\$3,228,191	\$3,320,544
% of Pay	5.8%	6.0%

## **Present Value of Actuarial Accrued Liabilities**

The actuarial accrued liabilities (AAL) represents today's value of all benefits based on the past service of the actives and inactives. The AAL can be compared to the assets to determine the funded status of the Plan. The value of these earned benefits is shown in Table II below.

Table II		
	January 1, 2012	January 1, 2014
Actives		
Superannuations	\$149,152,614	\$153,497,708
Termination	1,928,944	1,562,836
Death	4,026,631	4,476,454
Disability	8,843,964	9,078,538
Retirees and Inactives		
Retirees and Beneficiaries	142,348,841	162,819,921
Terminated (Refund)	2,054,902	2,225,565
Disabled	30,650,968	31,265,815
Total	\$339,006,864	\$364,926,837

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## **Present Value of Future Benefits**

The present value of future benefits represents today's value of all benefits earned by the inactive participants as well as all benefits earned and expected to be earned in the coming years by the active participants. The difference between the present value of future benefits and the present value of actuarial accrued liabilities is the value of benefits to be earned in the coming years. The value of the total expected benefits is shown in Table III.

Table III	[	
	<u>January 1, 2012</u>	January 1, 2014
Actives		
Superannuation	\$188,897,534	\$192,087,326
Termination	3,764,763	3,305,988
Death	6,162,576	6,859,323
Disability	21,585,108	21,986,005
Retirees and Inactives		
Retirees and Beneficiaries	142,348,841	162,819,921
Terminated (Refund)	2,054,902	2,225,565
Disabled	30,650,968	31,265,815
Total	\$395,464,692	\$420,549,943

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# **Funded Status and Appropriations:**

## **Market Value of Plan Assets**

The trust fund composition on a market value basis is shown in Table IV.

Tal	ble IV	
	<u>January 1, 2012</u>	<u>January 1, 2014</u>
Cash equivalents	\$5,089,728	\$10,687,094
Short term investments	0	380,544
Fixed income securities	47,411,511	38,961,153
Equities	88,527,978	128,403,540
International	23,567,501	39,891,053
Real Estate	16,245,891	17,145,827
Venture Capital	0	0
Other	9,684,947	13,083,334
Accounts receivable	6,791,575	8,497,680
Accounts payable	(667,065)	(1,313,076)
Accrued income	<u>351,213</u>	<u>341,500</u>
Total Market Value	\$197,003,279	\$256,078,649
Total Actuarial Value	\$209,808,060	\$239,531,317

17.68%

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#### **Actuarial Value of Assets**

(18)

Market Value Return for 2013

The actuarial value of assets is determined by projecting the market value of assets as of the beginning of the prior plan year with the assumed rate of return during that year (8%) and accounting for deposits and disbursements with interest at the assumed rate of return. An adjustment is then applied to recognize the difference between the actual investment return and expected return over a five year period. This preliminary actuarial value is not allowed to differ from the market value of assets by more than 20%. The calculation of the actuarial value of assets as of January 1, 2014 is presented in Table V.

	Table V	
		January 1, 2014
(1)	Market value at January 1, 2013	\$218,026,003
(2)	2013 Contributions	\$20,883,062
(3)	2013 Payments	(\$21,335,615)
(4)	Net interest adjustment at 8.00% on (1), (2), and (3) to December 31, 2013	\$17,422,470
(5)	Expected market value on January 1, 2014	\$234,995,920
	(1) + (2) + (3) + (4)	
(6)	Actual market value on January 1, 2014	\$256,078,649
(7)	2013 (Gain) / Loss	(\$21,082,729)
(8)	80% of 2013 (Gain) / Loss	(\$16,866,183)
(9)	2012 (Gain) / Loss	(\$6,317,398)
(10)	60% of 2012 (Gain) / Loss	(\$3,790,439)
(11)	2011 (Gain) / Loss	\$15,535,093
(12)	40% of 2011 (Gain) / Loss	\$6,214,037
(13)	2010 (Gain) / Loss	(\$10,523,736)
(14)	20% of 2010 (Gain) / Loss	(\$2,104,747)
	Actuarial value on January 1, 2014, $(6) + (8) + (10) + (12) + (14)$	
(15)	but not less than 80% nor greater than 120% of (6)	\$239,531,317
(16)	Ratio of actuarial value to market value	93.54%
(17)	Market Value Return for 2012	11.21%
(10)	M. J. W. J. D	17 (00)

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## **Unfunded Actuarial Accrued Liabilities**

Under the Entry Age Normal Actuarial Cost Method, the Actuarial Accrued Liability represents what the accumulated assets would have been as of the valuation date if:

- current plan provisions and assumptions had always been in effect,
- experience conformed exactly to assumptions, and
- the normal cost had been contributed each year since inception.

The actuarial value of the Fund's assets as of the end of the prior year are subtracted from the Actuarial Accrued Liability (AAL) to determine the Unfunded Actuarial Accrued Liability (UAAL) as of the valuation date. Over time, annual pension contributions will accumulate Plan assets equal to the AAL, and the UAAL will be eliminated. Thereafter, annual contributions equal to the normal cost will keep the Plan's assets and liabilities in balance. The UAAL is developed in Table VI.

	Tal	ble VI	
		January 1, 2012	<u>January 1, 2014</u>
Actuarial Accrued L	iability	\$339,006,864	\$364,926,837
Actuarial Assets		209,808,060	239,531,317
Unfunded Actuarial	Accrued Liability	\$129,198,804	\$125,395,520
Funded Status		61.9%	65.6%

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## **Appropriations**

The pension appropriation for the upcoming fiscal years have been calculated in accordance with the requirements set forth in Section 22D of Chapter 32 of the Massachusetts General Laws. These amounts were calculated to comply with the June 30, 2040, full funding mandate for all accrued liabilities. The pension appropriation is the sum of the:

- Employer normal cost,
- Increasing amortization of the unfunded actuarial accrued liability by June 30, 2030 \$123,361,459 over 16 years with 4.5% increasing payments
- Increasing amortization of the FY04 Appropriation Deferral by June 30, 2026 \$1,331,842 over 12 years with 4.5% increasing payments
- Increasing amortization of the 2002/2003 Early Retirement Incentives by June 30, 2015 \$ 104,169 over 1 years with 4.5% increasing payments
- Increasing amortization of the 2004 Early Retirement Incentive by June 30, 2021 \$598,049 over 7 years with 4.5% increasing payments
- Interest adjustment for payments contributed quarterly over fiscal year.

The pension appropriation for FYE10 is shown in Table VII.

Table VII					
	<u>January 1, 2012</u>	January 1, 2014			
Normal cost	\$3,228,191	\$3,320,544			
Amortization of the unfunded accrued liability	9,189,955	9,758,185			
Amortization of the FY04 Deferral	121,039	132,178			
Amortization payment of 2002/2003 ERI liability	95,391	104,169			
Amortization payment of 2004 ERI liability	89,176	94,106			
Amortization payment of 1992 Housing ERI liability	<u>3,884</u>	<u>0</u>			
Total cost before interest adjustments	\$12,727,636	\$13,409,182			
Fiscal 2015 cost	\$14,753,156	\$14,753,156			
Fiscal 2016 cost	\$15,213,845	\$14,943,906			

#### **Appropriation Forecast**

The following exhibit forecasts employer and employee contributions over the next 32 years under the adopted funding schedule.

Note that the forecast is based upon an "open group" method. This method assumes that sufficient employees will be hired each year to keep the number constant. The total payroll of the system is expected to increase 4.5% per year. The employee contribution rate is expected to increase to 10.5% by 2034 as members contributing base percentages 5%, 7%, and 8% are replaced by new members, whose base contribution is 9%. Payments are assumed to be made at the beginning of the year.

The employer total cost is expected to increase during the next 15 years until the unfunded liabilities are completely paid off, at which time only the normal cost will remain. The total cost represents 25.8% of payroll, decreasing to 23.6% by the time the unfunded liabilities are fully paid off, leaving only a normal cost of about 4.5% thereafter. The decrease in the cost as a percentage of payroll is a result of the increase in member deductions.

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## **Appropriation Forecast**

Fiscal			Employer	Amortization	Employer	Employer	
Year		Employee	Normal Cost	Payments	Total Cost	<b>Total Cost</b>	Funded
<b>Ending</b>	Payroll*	Contribution	with Interest	with Interest	with Interest	% of Payroll	Ratio %**
2015	\$55,498,644	\$4,815,844	\$3,551,032	\$11,202,124	\$14,753,156	26.6	65.8
2016	\$57,996,083	\$5,085,409	\$3,654,308	\$11,289,598	\$14,943,906	25.8	67.6
2017	\$60,605,907	\$5,369,482	\$3,759,688	\$11,605,377	\$15,365,065	25.4	69.5
2018	\$63,333,173	\$5,668,824	\$3,867,153	\$12,127,619	\$15,994,772	25.3	71.5
2019	\$66,183,165	\$5,984,233	\$3,976,676	\$12,673,362	\$16,650,038	25.2	73.4
2020	\$69,161,408	\$6,316,550	\$4,088,225	\$13,243,663	\$17,331,888	25.1	75.4
2021	\$72,273,671	\$6,666,658	\$4,201,761	\$13,839,628	\$18,041,389	25.0	77.4
2022	\$75,525,986	\$7,035,484	\$4,317,236	\$14,325,456	\$18,642,692	24.7	79.5
2023	\$78,924,656	\$7,424,004	\$4,434,595	\$14,970,101	\$19,404,696	24.6	81.6
2024	\$82,476,265	\$7,833,245	\$4,553,775	\$15,643,756	\$20,197,531	24.5	83.8
2025	\$86,187,697	\$8,264,283	\$4,674,700	\$16,347,725	\$21,022,425	24.4	86.0
2026	\$90,066,143	\$8,718,253	\$4,797,288	\$17,083,373	\$21,880,661	24.3	88.2
2027	\$94,119,120	\$9,196,345	\$4,921,442	\$17,612,407	\$22,533,849	23.9	90.5
2028	\$98,354,480	\$9,699,810	\$5,047,055	\$18,404,966	\$23,452,021	23.8	92.8
2029	\$102,780,432	\$10,229,965	\$5,174,008	\$19,233,189	\$24,407,197	23.7	95.2
2030	\$107,405,551	\$10,788,192	\$5,302,166	\$20,098,683	\$25,400,849	23.6	97.6
2031	\$112,238,801	\$11,375,943	\$5,431,381	\$0	\$5,431,381	4.8	100.0
2032	\$117,289,547	\$11,994,746	\$5,561,489	\$0	\$5,561,489	4.7	100.0
2033	\$122,567,577	\$12,646,205	\$5,692,307	\$0	\$5,692,307	4.6	100.0
2034	\$128,083,118	\$13,332,006	\$5,823,637	\$0	\$5,823,637	4.5	100.0
2035	\$133,846,858	\$14,053,920	\$5,955,261	\$0	\$5,955,261	4.4	100.0
2036	\$139,869,967	\$14,686,347	\$6,223,247	\$0	\$6,223,247	4.4	100.0
2037	\$146,164,115	\$15,347,232	\$6,503,293	\$0	\$6,503,293	4.4	100.0
2038	\$152,741,500	\$16,037,858	\$6,795,942	\$0	\$6,795,942	4.4	100.0
2039	\$159,614,868	\$16,759,561	\$7,101,759	\$0	\$7,101,759	4.4	100.0
2040	\$166,797,537	\$17,513,741	\$7,421,338	\$0	\$7,421,338	4.4	100.0
2041	\$174,303,426	\$18,301,860	\$7,755,298	\$0	\$7,755,298	4.4	100.0
2042	\$182,147,080	\$19,125,443	\$8,104,287	\$0	\$8,104,287	4.4	100.0
2043	\$190,343,699	\$19,986,088	\$8,468,980	\$0	\$8,468,980	4.4	100.0
2044	\$198,909,165	\$20,885,462	\$8,850,084	\$0	\$8,850,084	4.4	100.0
2045	\$207,860,078	\$21,825,308	\$9,248,338	\$0	\$9,248,338	4.4	100.0
2046	\$217,213,781	\$22,807,447	\$9,664,513	\$0	\$9,664,513	4.4	100.0
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<sup>\*</sup> Calendar basis

<sup>\*\*</sup> Beginning of Fiscal Year

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#### GASB Statements No. 25 and No. 27

Effective for periods beginning after June 15, 1997, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 25 and 27. These statements, which replace GASB Statement No. 5, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

Footnote disclosures required by GASB Statement No. 25 and 27 include a description of the plan, a summary of significant accounting policies, and information about contributions, legally required reserves, and investment concentrations. As a result of the oversight of the Public Employees Retirement Administration Commission (PERAC) and the conversion of unpaid contributions to pension related debt, the Net Pension Obligation (NPO) as required by Statement No. 27 will effectively always be equal to \$0. The required disclosure information is shown in Table VIII.

Table VIII				
		<u>January 1, 2012</u>	<u>January 1, 2014</u>	
(1)	Actuarial Accrued Liability	\$339,006,864	\$364,926,837	
(2)	Actuarial Value of Assets	209,808,060	239,531,317	
(3)	Unfunded Actuarial Accrued Liability	129,198,804	125,395,520	
(4)	Funded Ratio (2)/(1)	61.9%	65.6%	
(5)	Covered Payroll	\$55,614,435	\$55,498,644	
(6)	UAAL as a percentage of payroll: (3)/(5)	232.3%	225.9%	
(7)	Annual Required Contribution (ARC)	\$14,202,211	\$14,753,156	
(8)	Net Pension Obligation	\$0	\$0	

3.5%

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Rate of Salary Increase:

# PERAC Annual Statement APPENDIX PAGE 3 ACTUARIAL VALUATION AND ASSUMPTIONS

The most recent actuarial valuation of the System was prepared by Sherman Actuarial Services as of January 1, 2014.

The normal cost for employees on that date was:	\$4,815,844	8.7% of pay
The normal cost for the employer was:	2,885,544	5.2% of pay
The actuarial liability for active members was:		\$168,615,536
The actuarial liability for retired and inactive members was:		196,311,301
Total actuarial accrued liability:		364,926,837
System assets as of that date:		239,531,317
Unfunded actuarial accrued liability:		\$125,395,520
The ratio of system's assets to total actuarial liability was		65.6%
The principal actuarial assumptions used in the valuation are as follows:		
Investment Return:		8.0%

#### SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	UAAL as a percent of Covered Payroll
	(a)	(b)	(b-a)	(a/b)	(c)	(b-a)/c
01/01/14	\$239,531,317	\$364,926,837	\$125,395,520	65.6%	\$55,498,644	225.9%
01/01/12	209,808,060	339,006,864	129,198,804	61.9%	55,614,435	232.3%
01/01/10	197,520,054	293,303,727	95,783,673	67.3%	53,542,943	178.9%
01/01/08	192,018,134	281,787,443	89,769,309	68.1%	51,021,751	175.9%
01/01/06	159,373,967	239,916,299	80,542,332	66.4%	47,703,996	168.8%
01/01/04	134,563,000	202,034,000	67,471,000	66.6%	44,752,000	150.8%
01/01/03	115,023,000	191,994,000	76,971,000	59.9%	46,332,000	166.1%
01/01/02	118,245,000	184,647,000	66,402,000	64.0%	45,648,000	145.5%
		Attach Copy of	Current Approved F	Funding Schedule	e	

#### GASB Statements No. 67 and No. 68

Effective for periods beginning after June 15, 2013, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 25 and 27. These statements, which amend GASB Statements No. 25 and No. 27, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

The statement requires the system to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position. The statement of fiduciary net position presents the following items as of the end of the plan's reporting period, as applicable:

- Assets
- Deferred outflows of resources (consumption of net assets by the employers that is applicable to a future reporting period)
- Liabilities
- Deferred inflows of resources (acquisition of net assets by the employers that is applicable to a future reporting period)
- Fiduciary net position (Assets + Deferred outflows Liabilities Deferred inflows)

The system is considered a cost-sharing multiple-employer pension plan since pension obligations exist for employees of more than one employer and plan assets can be used to pay the benefits of the employees of any employer.

This report does not include all items required under GASB Statements No. 67 and No. 68. Rather, it provides all items required that are not readily available from other sources such as the Annual Statement of the Financial Condition prepared by the Board, Chapter 32 of the Massachusetts General Laws and investment reports prepared by the plan's investment consultant.

#### **Discount Rate**

The discount rate, and all other actuarial assumptions, are the as those described in Exhibit 6. The discount rate was selected based on a projection of employer and employee contributions, benefit payments, expenses and the long term expected rate of return on trust assets. Under Chapter 32 of the Massachusetts Laws, employers are required to make the necessary contributions to the trust such that the plan reaches a full funding status by 2040. In addition, Chapter 32 also gives the Retirement Board the right to go directly to the Assessors of the community and add an additional property tax to bills for amounts not paid by employer.

Based on these laws and assumptions, the pensions plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The Board selected 8.00% as the long term expectation of investment returns. The average return for the 29 years ending as of December 31, 2013 was 9.95%. The average return for the past 5 years ending December 31, 2013 was 13.22%.

#### **Assets**

The Net Position Restricted for Pensions, shown in page 7, is \$256,078,649. The 2013 Annual Statement of the Financial Condition contains the values for previous years and the changes in Net Position Restricted for Pensions. Investments are reported at fair value.

#### Net Pension Liability as of December 31, 2013 – GASB Statement No. 67

The following presents the net pension liability of the system calculated using the discount rate of 8.00%, as well as what the system's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7.00%) or 1-percentage-point higher (9.00%) than the current rate:

	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Total Pension Liability	\$ 403,311,042	\$ 364,926,837	\$ 332,022,959
Plan Fiduciary Net Position	\$ 256,078,649	\$ 256,078,649	\$ 256,078,649
Net Pension Liability	\$ 147,232,393	\$ 108,848,188	\$ 75,944,310

The Plan Fiduciary Net Position as a percentage of the Total Pension Liability is 70.2%.

#### Net Pension Liability as of June 30, 2014 – GASB Statement No. 68

The following presents the net pension liability of the system calculated using the discount rate of 8.00%, as well as what the system's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7.00%) or 1-percentage-point higher (9.00%) than the current rate:

	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Total Pension Liability	\$ 413,441,006	\$ 374,092,705	\$ 340,362,380
Plan Fiduciary Net Position*	\$ 267,517,147	\$ 267,517,147	\$ 267,517,147
Net Pension Liability	\$ 145,923,859	\$ 106,575,558	\$ 72,845,233

<sup>\*</sup>Estimated

The Plan Fiduciary Net Position as a percentage of the Total Pension Liability is 71.5%.

## **Schedules of Required Supplementary Information**

	<u>2013</u>
Total Pension Liability – Beginning	n/a
Total Pension Liability – Ending (a)	\$ 364,926,837
Plan Fiduciary Net Position – Beginning	n/a
Plan Fiduciary Net Position – Ending (b)	\$ 256,078,649
Net Pension Liability – Ending (a) – (b)	\$ 108,848,188
Plan Fiduciary Net Positions as a percentage	
of the Total Pension Liability	70.2%
Covered-employee payroll	\$ 55,498,644
Net Pension Liability as a percentage of	
Covered-employee Payroll	196.1%

# **EXHIBITS**

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#### Age/Service Distribution with Salary as of January 1, 2014

Attained Age	Average Salary <5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 20	1	0	0	0	0	0	0	0	0	1
	16,234	0	0	0	0	0	0	0	0	16,234
20-24	10	0	0	0	0	0	0	0	0	10
	22,130	0	0	0	0	0	0	0	0	22,130
25-29	19	11	0	0	0	0	0	0	0	30
	38,907	48,791	0	0	0	0	0	0	0	42,531
30-34	15	25	12	1	1	0	0	0	0	54
	40,689	48,647	61,955	0	0	0	0	0	0	49,250
35-39	21	25	26	12	2	0	0	0	0	86
	45,967	53,756	58,904	78,092	0	0	0	0	0	56,935
40-44	26	28	22	45	9	2	1	0	0	133
	36,923	36,447	68,078	76,611	72,424	0	0	0	0	58,518
45-49	25	33	32	32	22	27	4	0	0	175
	29,738	38,768	50,275	67,298	82,860	77,864	0	0	0	57,333
50-54	21	34	45	44	27	27	24	1	0	223
	31,987	35,356	32,436	46,221	52,338	83,280	74,849	23,669	0	48,650
55-59	11	28	32	33	26	47	16	9	1	203
	43,582	41,010	41,085	42,587	43,313	61,089	94,223	92,378	106,464	53,155
60-64	7	11	15	27	12	18	11	8	4	113
	36,682	34,123	45,082	42,297	41,948	39,181	53,489	108,628	73,457	47,878
65-69	0	4	5	3	1	10	3	2	0	28
	0	44,293	28,993	25,287	114,708	44,545	30,440	54,864	0	41,400
70+	1	1	3	3	2	2	1	0	0	13
	12,747	16,389	60,674	26,117	15,480	28,703	26,414	0	0	31,099
Total Employees		200	192	200	102	133	60	20	5	1,069
Average Salary	36,156	41,580	47,703	56,367	55,520	63,385	66,834	91,691	80,058	51,916

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#### Retiree Distribution as of January 1, 2014

	Number of Employees			Total		
Attained Age	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	0	0	0	0	0	0
40-44	0	0	0	0	0	0
45-49	3	1	4	38,367	1,437	39,804
50-54	4	1	5	229,811	4,613	234,424
55-59	24	12	36	1,383,309	74,764	1,458,073
60-64	64	48	112	2,923,029	650,013	3,573,042
65-69	78	54	132	3,085,794	936,517	4,022,311
70-74	67	66	133	2,210,598	1,013,921	3,224,518
75-79	48	35	83	1,266,790	496,188	1,762,978
80-84	57	31	88	1,263,426	462,577	1,726,002
85-89	47	23	70	751,498	204,526	956,024
90-94	22	14	36	286,609	121,054	407,663
95+	12	4	16	103,449	27,648	131,097
otal	426	289	715	13,542,680	3,993,258	17,535,937
verage (Age/Payment)	74.27	73.09	73.79	31,790	13,818	24,526
requency Percent	59.6	40.4	100.0	77.2	22.8	100.0

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#### Disabled Retiree Distribution as of January 1, 2014

	Number of Employees			Total		
Attained Age	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	1	1	0	19,063	19,063
35-39	0	0	0	0	0	0
40-44	0	1	1	0	26,767	26,767
45-49	3	2	5	174,692	47,053	221,745
50-54	6	1	7	315,805	19,151	334,957
55-59	8	3	11	297,852	105,092	402,943
60-64	14	4	18	619,398	69,321	688,719
65-69	21	0	21	803,411	0	803,411
70-74	8	2	10	317,945	19,207	337,153
75-79	10	0	10	220,694	0	220,694
80-84	4	0	4	96,328	0	96,328
85-89	3	0	3	44,973	0	44,973
90-94	1	0	1	11,999	0	11,999
95-99	0	0	0	0	0	0
otal	78	14	92	2,903,098	305,654	3,208,752
verage (Age/Payment)	67.5	56.6	65.9	37,219	21,832	34,878
equency Percent	84.8	15.2	100.0	90.5	9.5	100.0

## **EXHIBIT 4 - CASHFLOW FORECAST:**

The following is a 30 year forecast of benefit payments net of state reimbursable COLA payments, Contribution Income and Investment Returns.

Plan Year Ending	Benefit Payments	Employee Contributions	Employer Contributions	Investment Returns	Net change in plan assets
2014	\$18,455,877	\$4,815,844	\$14,753,156	\$18,115,757	\$19,228,880
2015	19,298,727	5,085,409	14,943,906	20,049,837	20,780,425
2016	20,273,721	5,369,482	15,365,065	21,665,764	22,126,589
2017	21,330,634	5,668,824	15,994,772	23,401,349	23,734,311
2018	22,306,148	5,984,233	16,650,038	25,269,239	25,597,361
2019	23,282,310	6,316,550	17,331,888	27,286,668	27,652,796
2020	24,245,073	6,666,658	18,041,389	29,469,612	29,932,586
2021	25,332,636	7,035,484	18,642,692	31,829,276	32,174,816
2022	26,368,110	7,424,004	19,404,696	34,372,280	34,832,871
2023	27,405,181	7,833,245	20,197,531	37,128,523	37,754,118
2024	28,452,107	8,264,283	21,022,425	40,118,779	40,953,380
2025	29,510,408	8,718,253	21,880,661	43,365,269	44,453,774
2026	30,543,019	9,196,345	22,533,849	46,891,210	48,078,385
2027	31,515,759	9,699,810	23,452,021	50,712,566	52,348,638
2028	32,439,191	10,229,965	24,407,197	54,878,353	57,076,324
2029	33,287,575	10,788,192	25,400,849	59,426,227	62,327,693
2030	34,109,468	11,375,943	5,431,381	64,195,405	46,893,261
2031	34,904,612	11,994,746	5,561,489	67,923,708	50,575,331
2032	35,545,524	12,646,205	5,692,307	71,953,325	54,746,313
2033	36,043,435	13,332,006	5,823,637	76,322,972	59,435,180
2034	36,310,843	14,053,920	5,955,261	81,077,561	64,775,899
2035	36,587,660	14,686,347	6,223,247	86,251,035	70,572,969
2036	36,714,000	15,347,232	6,503,293	91,894,279	77,030,804
2037	36,711,735	16,037,858	6,795,942	98,059,301	84,181,366
2038	36,514,580	16,759,561	7,101,759	104,804,125	92,150,865
2039	36,250,365	17,513,741	7,421,338	112,189,256	100,873,970
2040	35,858,252	18,301,860	7,755,298	120,277,375	110,476,281
2041	35,216,270	19,125,443	8,104,287	129,143,607	121,157,067
2042	34,432,745	19,986,088	8,468,980	138,869,987	132,892,310
2043	33,556,200	20,885,462	8,850,084	149,538,975	145,718,321

## EXHIBIT 5 – SUMMARY OF PLAN PROVISIONS:

This summary is prepared in accordance with Chapter 32 as of January 1, 2014, and does not take into account any subsequent changes.

#### 1. Administration

Each of the 107 contributory retirement systems for public employees of the Commonwealth of Massachusetts are guided by the applicable provisions of Chapter 32 of the Massachusetts General Laws and other applicable statutes. Although these boards operate semi-independently, there is a uniform set of rules governing benefits, eligibility, contributions, financing, and accounting.

#### 2. Participation

Participation is mandatory for all full-time employees whose employment commences prior to age 65. Eligibility with respect to part-time, professional, temporary, or intermittent employment is governed by the local board. Membership is optional for certain elected officials, State officials appointed by the Governor, and certain hospital interns.

There are four classes of membership as follows:

- (i) Group 1: Most general employees in State and local government
- (ii) Group 2: Certain specified hazardous duty positions
- (iii) Group 3: State police officers and inspectors
- (iv) Group 4: Local police officers, firefighters, and designated employees of the municipal light department.

For members in more than one group, participation will be proportional.

Chapter 176 of the Acts of 2011 created different plan provisions within these groups for those hired on or after April 2, 2012.

#### 3. Salary

Salary is defined as gross regular compensation. Salary <u>does not</u> include bonuses, overtime, severance pay, unused sick leave credit, or other similar compensation.

#### 4. Member Contributions

Member contributions vary depending upon date hired as follows:

Member					
<b>Date of Hire</b>	<b>Contribution Rate</b>				
Prior to 1975	5.0% of Salary				
1975 to 1983	7.0% of Salary				
1984 to 1996	8.0% of Salary				
1996 and Later plus	9.0% of Salary				
1979 and Later	2.0% of Salary in excess of \$30,000				

For Group 1 employees who become members on or after April 2, 2012, the Contribution Rate shall be 6% after the completion of 30 years of service.

#### 5. Average Salary

Average salary is used to determine a participant's benefit. It is defined as the average salary during the three consecutive-year period that produces the highest average. (Alternatively, if a greater amount results, it is the average rate of salary earned during the period or periods, whether or not consecutive, that constitutes the last three years preceding retirement.). For employees who become members on or after April 2, 2012, the averaging period shall be five years.

#### 6. <u>Creditable Service</u>

In general, creditable service is awarded during the period in which a member contributes to the retirement system.

## 7. Service Retirement

#### a. Eligibility:

For an employee to be eligible for service retirement (also referred to as superannuation), one of the following conditions must be met:

- (i) completion of 20 years of service
- (ii) for an employee hired prior to January 1, 1978, attainment of age 55 as an active member
- (iii) for an employee hired on or after January 1, 1978, attainment of age 55 as an active member and completion of ten years of service
- (iv) for a Group 1 employee hired on or after April 2, 2012, attainment of age 60 and completion of ten years of service

## b. Benefit Amount:

The retirement allowance is determined as a product of the participant's Benefit Rate times Average Salary times Creditable Service, where Benefit Rate is determined from the following table for those hired prior to April 2, 2012:

Age at	Percentage of Average Salary				
<u>Retirement</u>	Group 1	Group 2	Group 4		
	0.4.7	0.4.7	0.0.7		
65 or Over	.025	.025	.025		
64	.024	.025	.025		
63	.023	.025	.025		
62	.022	.025	.025		
61	.021	.025	.025		
60	.020	.025	.025		
59	.019	.024	.025		
58	.018	.023	.025		
57	.017	.022	.025		
56	.016	.021	.025		
55	.015	.020	.025		
54	.014	.014	.024		
53	.013	.013	.023		
52	.012	.012	.022		
51	.011	.011	.021		
31	.011	.011	.021		
50	.010	.010	.020		
49	.009	.009	.019		
48	.008	.008	.018		
47	.007	.007	.017		
46	.006	.006	.016		
45	.005	.005	.015		
44	.004	.004	.004		
43	.003	.003	.003		
42	.002	.002	.002		
41	.001	.001	.002		
71	.001	.001	.001		

For those hired after April 1, 2012 who retire with less than 30 years of service, the following rates are applied:

Age at	Percentage of Average Salary					
Retirement	Group 1	Group 2	Group 4			
67 or Over	.0250	.0250	.0250			
66	.0235	.0250	.0250			
65	.0220	.0250	.0250			
64	.0205	.0250	.0250			
63	.0190	.0250	.0250			
62	.0175	.0250	.0250			
61	.0160	.0235	.0250			
60	.0145	.0220	.0250			
59		.0205	.0250			
58		.0190	.0250			
57		.0175	.0250			
56		.0160	.0235			
55		.0145	.0220			
54			.0205			
53			.0190			
52			.0175			
51			.0160			
50			.0145			

For those hired after April 1, 2012 who retire with at least 30 years of service, the following rates are applied:

Age at	Percentage of Average Salary						
Retirement	Group 1	Group 2	Group 4				
67 or Over	.02500	.02500	.02500				
66	.02375	.02500	.02500				
65	.02250	.02500	.02500				
64	.02125	.02500	.02500				
63	.02000	.02500	.02500				
62	.01875	.02500	.02500				
61	.01750	.02375	.02500				
60	.01625	.02250	.02500				
59		.02125	.02500				
58		.02000	.02500				
57		.01875	.02500				
56		.01750	.02375				
55		.01625	.02250				
54			.02125				
53			.02000				
52			.01875				
51			.01750				
50			.01625				

## 8. <u>Deferred Vested Retirement</u>

#### a. <u>Eligibility</u>:

A participant who has completed ten or more years of creditable service is eligible for a deferred vested retirement benefit. If termination is involuntary, the participant is vested after six years.

#### b. Benefit Amount:

The participant's accrued benefit is payable commencing at age 55, or may be deferred until later at the employee's option.

#### c. Refund of Contributions:

In lieu of the deferred pension benefit, a member may elect to receive a refund of their accumulated contributions. Members with ten or more years of service are entitled to 100% of the credited interest on their contributions. Members with five to ten years of service are entitled to 50% of the credited interest on their contributions. No credited interest is provided for members with less than five years of service.

#### 9. Accidental Disability

#### a. Eligibility:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

#### b. Benefit Amount:

The accidental disability amount is 72% of annual salary plus \$450 per year for each child plus an additional annuity based upon accumulated Member Contributions with credited interest.

#### 10. Ordinary Disability

#### a. Eligibility:

An ordinary disability occurs when a member becomes permanently and totally disabled due to sickness or injury that is not job related. In order to be eligible for an ordinary disability benefit, a member must have ten years of service (and be less than age 55 or age 60 if hired on or after April 2, 2012).

#### b. <u>Benefit Amount</u>:

The ordinary disability amount is equal to the accrued retirement benefit as if the member were age 55 (age 60 if hired on or after April 2, 2012). If the member was a veteran, the benefit is 50% of the member's final rate of Salary during the preceding 12 months, plus an annuity based upon accumulated Member Contributions plus credited interest. If the participant is over age 55 (age 60 if hired on or after April 2, 2012), he

will receive not less than the superannuation allowance to which he is entitled.

#### 11. Survivor Benefits

#### a. Occupational Death:

The survivors of a member who dies due to an occupational injury will be entitled to a lump sum return of contributions plus a pension benefit equal to 72% of the participant's annual Salary.

#### b. Non-Occupational Death:

Upon the death of a member other than due to an occupational injury, the designated beneficiary will be entitled to a retirement benefit as if Option C had been elected with a minimum of \$250 per month to the surviving spouse, plus \$120 for the first child, plus \$90 for each additional child. If no beneficiary is designated and if the employee worked two years, and is married at least one year, the spouse may elect benefits. If there is no designated beneficiary or surviving spouse, then member contributions are returned. If there are dependent children but no surviving spouse, they may elect minimum survivor benefits of \$250 per month plus \$120 for the first child and \$90 for each additional child.

#### c. Refund of Contributions:

Upon the death of a member not entitled to survivor benefits, the beneficiary is entitled to a refund of all member contributions with interest.

#### 12. <u>Cost-of-Living Increases</u>

In accordance with the adoption of Chapter 17 of the Acts of 1997, the granting of a cost-of-living adjustment will be determined by an annual vote by the Retirement Board. The amount of increase will be based upon the Consumer Price Index, limited to a maximum of 3.0%, beginning on July 1. All retirees, disabled retirees, and beneficiaries who have been receiving benefits payments for at least one year as of July 1 are eligible for the adjustment. The maximum amount of pension benefit subject to a COLA is \$14,000. All COLAs granted to members after 1981 and prior to July 1, 1998 are deemed to be an obligation of the State and are not the liability of the Retirement System.

#### 13. Postretirement Death Benefits

Any benefits following the death of a member after retirement are based upon the form of benefit the participant elected at the time of retirement. There are three available forms as follows:

- (i) Option A Life annuity
- (ii) Option B Life annuity with death benefit equal to excess of member contributions plus credited interest to retirement over annuity benefit paid to member
- (iii) Option C Life annuity with 66-2/3% of benefit continued after death of member to designated joint annuitant

# EXHIBIT 6 – ACTUARIAL METHODS AND ASSUMPTIONS:

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below.

#### 1. Member Data

The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired, and disabled members of the employer as supplied by the employer to the actuary.

#### 2. Valuation Date

January 1, 2014.

#### 3. Actuarial Cost Method

The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

#### 4. Rate of Investment Return

It is assumed that the assets of the fund will accumulate at a compound annual rate of 8.0% per annum.

#### 5. Salary Scale

It is assumed that salaries including longevity will increase at a rate of 3.5% per year. The previous actuarial valuation used a 4% salary scale.

#### 6. <u>Cost-of-Living Increases</u>

Cost-of-living increases have been assumed to be 3.0% of the lesser of the pension amount and \$14,000 per year.

#### 7. Value of Investments

Assets held by the fund are valued at market value as reported by the Public Employees'

Retirement Administration Commission (PERAC). The actuarial value of assets is determined using a five-year smoothing of asset returns greater than or less than the assumed rate of return.

#### 8. Annual Rate of Withdrawal Prior to Retirement

Based on an analysis of experience, the assumed annual rates of withdrawal may best be illustrated by the following rates at the following ages:

<u>Service</u>	General <u>Employees</u>	Police and Fire Employees
0	0.1500	0.0150
10	0.0540	0.0150
20	0.0200	0.0000
30	0.0000	0.0000

#### 9. Annual Rate of Mortality

It is assumed that both pre-retirement and post retirement mortality are represented by the RP-2000 Mortality Table for males and females, adjusted to 2015 with Scale AA. Mortality for disabled members is represented by the RP-2000 Mortality Table set forward two years for all disabled members. The 2012 actuarial valuation used Scale AA to 2010.

## 10. Service Retirement

Based on an analysis of experience, the assumed annual retirement rates are illustrated at the following ages for those hired prior to April 2, 2012:

	Male General	Female General	Male and Female Police and Fire
<u>Age</u>	<b>Employees</b>	<b>Employees</b>	<b>Employees</b>
50	0.0100	0.0150	0.02000
51	0.0100	0.0150	0.02000
52	0.0100	0.0200	0.02000
53	0.0100	0.0250	0.05000
54	0.0200	0.0250	0.07500
55	0.0200	0.0550	0.15000
56	0.0250	0.0650	0.10000
57	0.0250	0.0650	0.10000
58	0.0500	0.0650	0.10000
59	0.0650	0.0650	0.15000
60	0.1200	0.0500	0.20000
61	0.2000	0.1300	0.20000
62	0.3000	0.1500	0.25000
63	0.2500	0.1250	0.25000
64	0.2200	0.1800	0.30000
65	0.4000	0.1500	1.00000
66	0.2500	0.2000	1.00000
67	0.2500	0.2000	1.00000
68	0.3000	0.2500	1.00000
69	0.3000	0.2000	1.00000
70	1.0000	1.0000	1.00000

Based on an analysis of experience, the assumed annual retirement rates are illustrated at the following ages for those hired on or after April 2, 2012:

	Male General	Female General	Male and Female Police and Fire
Age	<b>Employees</b>	<b>Employees</b>	Employees
50	0.0000	0.0000	0.0100
51	0.0000	0.0000	0.0100
52	0.0000	0.0000	0.0200
53	0.0000	0.0000	0.0200
54	0.0000	0.0000	0.0200
55	0.0000	0.0000	0.0500
56	0.0000	0.0000	0.0750
57	0.0000	0.0000	0.1500
58	0.0000	0.0000	0.1000
59	0.0000	0.0000	0.1000
60	0.0500	0.0650	0.1000
61	0.0650	0.0650	0.1500
62	0.2000	0.1500	0.2000
63	0.2000	0.1300	0.2000
64	0.3000	0.1500	0.3000
65	0.2500	0.1250	1.0000
66	0.2200	0.1800	1.0000
67	0.4000	0.2500	1.0000
68	0.3000	0.2000	1.0000
69	0.3000	0.2000	1.0000
70	1.0000	1.0000	1.0000

#### 12. Annual Rate of Disability Prior to Retirement

Based on an analysis of experience, the assumed annual rates of disability may best be illustrated by the following probabilities at the following ages:

Attained <u>Age</u>	General <u>Employees</u>	Police and Fire Employees
20	0.0001	0.0010
30	0.0003	0.0030
40	0.0010	0.0030
50	0.0019	0.0125

In addition, it is assumed for the general employees that 45% of all disabilities are ordinary (55% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).

#### 13. Family Composition

It is assumed that 80% of all members will be survived by a spouse and that females (males) are three years younger (older) than members.

#### 14. Administrative Expenses

The normal cost is increased by an amount equal to the anticipated administrative expenses for the upcoming fiscal year. The amount for fiscal year 2014 is \$435,000 and is anticipated to increase at 4.5% per year.

## EXHIBIT 7 – GLOSSARY OF TERMS:

This glossary summarizes the technical terms contained in this report.

#### 1. Actuarial Accrued Liability

That portion of the Actuarial Present Value of plan benefits that is not provided for by future employer Normal Costs or employee contributions.

#### 2. <u>Actuarial Assumptions</u>

Assumptions as to the occurrence of future events affecting the Retirement System such as:

- Rates of investment returns
- Increases in a member's salary
- Inflation
- The probability of mortality, turnover, disablement
- Retirement at each age and other relevant items

#### 3. Actuarial Cost Method

A procedure for allocating the Actuarial Present Value of pension plan benefits between Normal Cost and Actuarial Accrued Liability.

#### 4. Actuarial Present Value

The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

#### 5. Forecast

A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions, and additional assumptions as to the replacement of terminating employees with new employees.

#### 6. Normal Cost

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

## 7. <u>Unfunded Actuarial Accrued Liability</u>

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

#### 8. Valuation Method

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs, and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

#### 9. <u>Vested Liability</u>

That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

## **CERTIFICATION:**

This report fairly represents the actuarial position of the City of Taunton Retirement System contributing as of January 1, 2014, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost are reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

Sherman Actuarial Services, LLC

Daniel W. Therman

Daniel W. Sherman, ASA, MAAA

Enrolled Actuary No. 11-4086

September, 2014

# **BREAKOUTS**

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## **Breakouts**

	Non-Light							Nursing		
	<b>Subtotal</b>	<u>Total</u>	<u>City</u>	<b>GATRA</b>	<u>Landfill</u>	Sewer	Water	<u>Home</u>	<u>Light</u>	<b>Housing</b>
(1) Participants										
(a) Actives	923	1,069	756	17	1	0	32	83	146	34
(b) Inactives	202	209	114	0	0	0	1	81	7	6
(c) Retirees and Beneficiaries	576	714	507	3	0	9	23	19	138	15
(e) Disabled Retirees	<u>75</u>	<u>92</u>	<u>59</u>	<u>0</u>	<u>0</u>	<u>3</u>	<u>3</u>	<u>9</u>	<u>17</u>	<u>1</u>
(f) Total	1,776	2,084	1,436	20	1	12	59	192	308	56
(2) Payroll of Active Participants	42,288,522	55,498,644	35,324,266	769,679	66,676	0	1,437,974	2,648,119	13,210,122	2,041,808
Percent of Total Payroll	76.20%	100.00%	63.65%	1.39%	0.12%	0.00%	2.59%	4.77%	23.80%	3.68%
(3) Normal Cost										
(a) Total Normal Cost	5,818,251	7,701,388	4,985,533	91,110	5,695	0	147,089	376,719	1,883,137	212,105
(b) Expected Employee Contributions	3,646,381	4,815,844	3,042,196	66,900	6,367	0	118,822	227,611	1,169,463	184,485
(c) Administrative Expenses	<u>317,274</u>	435,000	280,708	2,611	<u>192</u>	2,061	11,940	10,689	117,726	9,073
(d) Net Employer Normal Cost (a) - (b) + (c)	2,489,144	3,320,544	2,224,045	26,821	-480	2,061	40,207	159,797	831,400	36,693
(4) Actuarial Accrued Liability	266,165,419	364,926,837	235,489,044	2,190,541	161,152	1,729,175	10,016,639	8,967,097	98,761,418	7,611,770
(5) Assets*	174,706,124	239,531,317	154,570,712	1,437,831	105,777	1,134,999	6,574,739	5,885,839	64,825,193	4,996,227
(6) Unfunded Actuarial Accrued Liability (4) - (5)	91,459,295	125,395,520	80,918,332	752,710	55,375	594,176	3,441,900	3,081,258	33,936,225	2,615,543
(7) Amortizations										
(a) Unfunded Actuarial Accrued Liability	7,399,111	10,144,572	6,546,341	60,895	4,480	48,069	278,452	249,276	2,745,461	211,599
(b) Early Retirement Incentive	173,768	198,276	86,623	0	0	18,213	34,646	7,485	24,507	26,803
(c) Holiday	98,524	132,178	90,425	0	52	879	3,901	3,266	33,654	0
(8) Total Required Employer Contributions (3d) + (7)	10,160,548	13,795,569	8,947,434	87,716	4,052	69,222	357,205	419,824	3,635,022	275,095
(9) Fiscal 2015 Cost	10,896,961	14,753,156	9,626,236	94,741	3,640	91,540	379,251	439,270	3,856,195	262,283
Percentage of total	73.86%	100.00%	65.25%	0.64%	0.02%	0.62%	2.57%	2.98%	26.14%	1.78%
(10) Fiscal 2016 Cost	11,002,582	14,943,906	9,730,125	96,910	4,081	62,939	361,473	467,651	3,941,324	279,403
Percentage of total	73.63%	100.00%	65.11%	0.65%	0.03%	0.42%	2.42%	3.13%	26.37%	1.87%
(11) Fiscal 2017 Cost	11,313,020	15,365,065	10,004,141	99,621	4,194	64,860	371,884	480,919	4,052,045	287,400
(12) Fiscal 2018 Cost	11,775,650	15,994,772	10,412,760	103,586	4,397	67,779	388,014	499,371	4,219,122	299,742
(13) Fiscal 2019 Cost	12,257,007	16,650,037	10,837,895	107,707	4,610	70,829	404,843	518,510	4,393,030	312,613
(14) Fiscal 2020 Cost	12,757,841	17,331,888	11,280,208	111,988	4,833	74,017	422,400	538,360	4,574,046	326,036

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## **Appropriation Forecast - Municipal Light Plant**

Fiscal	<b>Employer Normal</b>	Unfunded			
Year	Cost and Admin	Liability	ERI	Holiday	Employer
<b>Ending</b>	<u>Expense</u>	<b>Amortization</b>	<b>Amortization</b>	<b>Amortization</b>	Total Cost
2016	\$903,810	\$2,986,905	\$12,999	\$37,610	\$3,941,324
2017	\$929,874	\$3,069,286	\$13,584	\$39,302	\$4,052,045
2018	\$956,453	\$3,207,404	\$14,195	\$41,071	\$4,219,122
2019	\$983,541	\$3,351,737	\$14,834	\$42,919	\$4,393,030
2020	\$1,011,130	\$3,502,565	\$15,501	\$44,850	\$4,574,046
2021	\$1,039,210	\$3,660,180	\$16,199	\$46,868	\$4,762,458
2022	\$1,067,771	\$3,824,889	\$0	\$48,977	\$4,941,637
2023	\$1,096,797	\$3,997,009	\$0	\$51,181	\$5,144,987
2024	\$1,126,273	\$4,176,874	\$0	\$53,485	\$5,356,632
2025	\$1,156,181	\$4,364,833	\$0	\$55,891	\$5,576,906
2026	\$1,186,501	\$4,561,251	\$0	\$58,407	\$5,806,158
2027	\$1,217,207	\$4,766,507	\$0	\$0	\$5,983,714
2028	\$1,248,275	\$4,981,000	\$0	\$0	\$6,229,275
2029	\$1,279,674	\$5,205,145	\$0	\$0	\$6,484,819
2030	\$1,311,371	\$5,439,376	\$0	\$0	\$6,750,747
2031	\$1,343,329	\$0	\$0	\$0	\$1,343,329